| | |
|---|---|
| From: | "Milt Clark" <mclark-59@comcast.net> |
| To: | Saric |
| | James: |
| CC: | "Paul \(MDEQ\) Bucholtz" <BUCHOLTZP@michigan.gov> |
| | "Todd W. King" <KingTW@cdmsmith.com> |
| Date: | 1/27/2013 8:08:19 PM |
| Subject: | Some RAO Details |

---

Jim,

With the completion of John Kern's work, perhaps we can have a brief discussion on Tuesday of adding a long-term RAO (e.g, 30 years), to our short-term RAOs (which we might be defining as post remedial sediment target and 10 year SMB, 0.05 to 0.20 ppm). We did have both short-term and long-term RAOs for the Fox and the approach seems reasonable.

While Tittabawasee RAOs may not have not as yet been developed (or the thinking may be evolving), the 2009 SOW below does mention time, risk based RAOs.

Note also that the SOW does include a bank/floodplain RAO, which probably would be of benefit for the Kalamazoo. Possible language might be:

**RAO 5: Reduce transport of PCBs from river bank and flood plain soils to the Kalamazoo River.** This RAO is intended to reduce the rate of transport of PCBs from river bank and flood plain soils to Kalamazoo River sediments at levels that pose risk to human health or the environment.

Thanks,

Milt

> Segment-Specific Post-Construction Residual Risk Assessment
>
> The Respondent shall conduct a human health and ecological risk assessment based on post-construction and/or Site-wide Monitoring (Task 4) data in accordance with the requirements of SOWSectionVII1.D. In order for response efforts at a particular segment to be considered complete, the residual risk analysis shall demonstrate that residual human health and ecological risk falls within ranges considered by EPA, in consultation with MDEQ, to be acceptable.
>
> If EPA, in consultation with MDEQ, determines:
>
> The residual risk analysis for both short-term RAOs and long-term RAOs demonstrates 'that residual human health and ecological risk falls within an acceptable risk range, then the response efforts at that particular segment (excluding ongoing operation, monitoring and maintenance) will be considered complete, pending a final OU 1 ROD.
>
> The residual risk analysis for short-term RAOs demonstrates that residual human health and ecological risk falls within an acceptable risk range, but that the residual risk analysis for long-term RAOs demonstrates that residual human health and/or ecological risk does not fall within an acceptable risk range, then the Respondent shall:
>
> > Conduct an analysis assessing whether residual contaminant levels in sediments, banks, and/or floodplain soils are likely to result in acceptable risk for the long-term RAOs in a reasonable period of time (e.g, predict future fish levels by use of site-specific BSAFs, predictive modeling, etc.);
> >
> > To the extent possible, and given the uncertainties about response decisions in other segments, predict the time until the long-term RAOs may be attained;
> >
> > Continue monitoring in accordance with approved plans; and Submit a Multi-Segment, OU-Wide, and/or Site-Wide Post-Construction Risk Assessment in accordance with sub-task 10.3.
>
> The residual risk analysis for short-term RAOs demonstrates that the residual risk does fall within an acceptable risk range, then the Respondent shall submit a new Segment-Specific Response Proposal that addresses sub-tasks 8.3 and 8.4 and a new RD pursuant to Task 9, in accordance with the Schedule in Exhibit B of this SOW.